

**Texas Immunization Registry** 

# Bidirectional Data Exchange Onboarding Guide (Syntropi)

Texas Department of State Health Services Immunization Unit



### Contents

Introduction	1
Benefits of the Bidirectional Data Exchange in Syntropi	2
Onboarding Steps for Bidirectional Data Exchange	2
Accessing Bidirectional Data Exchange in Syntropi	2
1. Registration of Intent	5
Overview	5
Bidirectional Registration of Intent	5
Parent Organization	6
Contacts	6
Readiness	
EHR	
Authorization to Release Credentials	9
3 <sup>rd</sup> Party Data Aggregation	9
Exchange Method	10
Electronically Signing and Submitting	11
Registration for Query-Only Data Exchange	13
Registration for Update-Only and Bidirectional Data Exchange	13
Choosing a Consent Mode	
2. Preparation - Message Pre-Testing	15
VXU Update Messages	
QBP Messages	27
3. Connectivity and Transport	32
4. Pre-Production Testing – Message Validation	
VXU Test Cases	36
QBP Test Cases	
Step 1: Submit HL7 Test Messages to ImmTrac2 Test Environme	ent 37
Step 2: Review ACK Messages & Make Corrections	39
Step 3: Download Query Test Cases	39
Texas Department of State Health Services Immunization Unit	Stock No. 11-16666 Rev. 04/2023



5. Pre-Production Testing – Data Quality Review	40
Bidirectional and Update-Only Onboarding	40
Submit Test Messages	41
Query-Only Onboarding	47
6. Go-Live – Connectivity and Transport	48
Overview	48
Support	48

Texas Department of State Health Services Immunization Unit



Texas Immunization Registry

This page is intentionally left blank.

Texas Department of State Health Services Immunization Unit



### Introduction

<u>Parent or standalone</u> organizations (orgs) interested in bidirectional data exchange (BiDX) with the Texas Immunization Registry can indicate their interest and perform BiDX onboarding via the Texas DSHS Immunization Portal (aka Syntropi).

Please refer to the 11-15952 Texas DSHS Immunization Portal Registration Guide, found on our Forms and Documents webpage at

<u>https://www.dshs.texas.gov/immunizations/providers/materials</u> for instructions on how to indicate interest in establishing a BiDX connection or onboarding with the registry.

The tile (widget) option **Bidirectional Data Exchange** becomes enabled or viewable to parent or standalone orgs once DSHS has approved the parent or standalone orgs ImmTrac2 registration. See *Figure 1: Bidirectional Data Exchange Widget*.

Child or subsites of parent orgs **<u>are not</u>** able to access the new Bidirectional Data Exchange option.



Figure 1: Bidirectional Data Exchange Widget

Texas Department of State Health Services Immunization Unit

Page 1



### Benefits of the Bidirectional Data Exchange in Syntropi

By using the Bidirectional Data Exchange widget, parent and standalone orgs can:

- Experience a streamlined process for BiDX onboarding
- Register their sites with the registry and BiDX using the same application
- Submit their registration of intent for BiDX
- Submit test messages for HL7 message validation
- Download test and production WSDL to establish a BiDX interface with the registry
- Receive auto-generated data quality metrics and reports

Additionally, electronic health records (EHR) vendors can track their providers' status for BiDX onboarding.

### **Onboarding Steps for Bidirectional Data Exchange**

A parent or standalone org must complete all the steps below to be fully onboarded for BiDX with the registry.

- 1. Registration
- 2. Preparation, Message Pre-Testing
- 3. Preparation, Connectivity & Transport
- 4. Pre-Production Testing, Message Validation
- 5. Pre-Production Testing, Data Quality Review
- 6. Go-Live, Connectivity & Transport

These steps are outlined in detail in this guide.

#### Accessing Bidirectional Data Exchange in Syntropi

To access the Bidirectional Data Exchange widget, you must:

- 1. Login to the HHS Enterprise Portal.
- 2. Select the **Syntropi CRC** option under "Applications."
- 3. Select the **Skip** button to bypass the "Pandemic Provider Enrollment" application. See *Figure 2: Pandemic Provider Enrollment*.

Texas Department of State Health Services Immunization Unit

Page 2



	C PROVIDER ENROLLMENT
Enroll to request	COVID-19 Vaccine
In order to receive COVID-19 vaccine, you	u must enroll with Texas DSHS.
You will need to provide the following inf	ormation to complete enrollment.
<ul> <li>Confirm location and shipping ad</li> </ul>	idress
<ul> <li>Provide days and times of the we</li> </ul>	eek when shipments of vaccine can be received.
<ul> <li>PLEASE NOTE: You MUST HAVE a</li> </ul>	t least one (1) day other than a Monday, which has a four (4) hour designated window for
delivery of your vaccine shipmen	t. For example: Thursday 8am to 12pm.
Proof of Vaccine Storage Capacity (On sit	e refrigeration and freezer storage units)
Information needed for each storage unit	E
<ul> <li>Storage Unit Location (within the</li> <li>Brand and Model</li> </ul>	e facility)
<ul> <li>Storage Capacity (cubic feet)</li> </ul>	PORTADA LA CONTRA DE
<ul> <li>Use [Primary, Backup/Overflow,</li> </ul>	Day Use1
<ul> <li>Refrigerator Type [Under the cou (Dual Control), Other]</li> </ul>	inter (freezerless), Standalone (freezerless), Combination (Single Control), Combination
<ul> <li>Refrigerator Grade [Household, Grade [Household, Grade [Household]</li> </ul>	Commercial, Medical/Laboratory/Pharmaceutical]
<ul> <li>Freezer Type [Standalone Uprigh</li> <li>Freezer Grade [Household, Com</li> </ul>	t, Standalone Chest, Combination (Single Control), Combination (Dual Control), Other] mercial, Medical/Laboratory/Pharmaceutical]
Needed Data Logger Information (for ref	rigerators, freezer and backup freezer data logger)
<ul> <li>Data Logger Type [Built-In, Digita</li> </ul>	I Data Logger (WIFI), Digital Data Logger (Wired), Other]
<ul> <li>Brand and Model</li> </ul>	
Serial Number	PROVIDENT AND ADDRESS AND ADDRESS AND ADDRESS ADDRESS ADDRESS ADDRESS ADDRESS ADDRESS ADDRESS ADDRESS ADDRESS A
<ul> <li>Calibration Expiration Date [Proc your enrollment request ]</li> </ul>	f for each Data Logger of a calibration certificate not expiring within 60 days of submitting
<ul> <li>Copy of the data logger certification</li> </ul>	te to upload into the enrollment form.
Vaccine Administering Capacity	
• This is the number of medical pr	actitioners currently licensed in the state of Texas working in the facility who have
Prescribing Authority.	COLORY (1997) N.Y. C. N. 1993 (1994) 100 (1997) 101.
Patient Profile	
<ul> <li>Information pertaining to the cu</li> </ul>	rrent patients served in the facility. (ex. Children, Adults and high-risk categories.)
	Enroll Now SKIP
	Skill Skill

Figure 2: Pandemic Provider Enrollment

Texas Department of State Health Services Immunization Unit

Page 3



4. Locate the Bidirectional Data Exchange widget on the main menu. See *Figure 3: Main Menu - Bidirectional Data Exchange*.

The widget only appears if you are a parent or standalone org, and DSHS has approved your recently submitted registration.



Figure 3: Main Menu - Bidirectional Data Exchange

Texas Department of State Health Services Immunization Unit

Page 4



**Texas Immunization Registry** 

### **1. Registration of Intent**

### **Overview**

In this section, you will learn to:

- Fill out and sign the Bidirectional Registration of Intent
- Access the BiDX Onboarding menu
- Indicate how your organization will submit registry consent

Note: The Bidirectional Data Exchange widget is only available once ImmTrac2 has approved the parent or standalone organization.

### **Bidirectional Registration of Intent**

Once available, the Bidirectional Data Exchange widget indicates "Click to submit your registration of intent for Bidirectional Exchange of Immunization with the Texas Immunization Registry." See *Figure 4: Link to Begin Bidirectional DX Onboarding*.

forme SIIS Help Desk				Resources
Facility Information Sprout Care Pediatrics DBA: 123 Any St, Suite B Houston, TX 77077 Harris	Facility Site Type: Private Practice Facility NPI: Manner of Usage: ✓ ImmTrac2 Org Code: SPROO TX IIS ID: 1122587000 TX IIS ID: 1122587000	e My Pr Fred S Phone 003 Email	rofile Sproutz e: (123) 123-1234 : FredS@sproutcare.com	ACIP Vaccine Recommendations and Guidelines
Phone: (123) 123-1234	Click below to complete tasks to fi	inish setting up you	r clinic's account.	Immunization Information Systems (IIS)
Policy Documents Complete & Submit required forms. ImmTrac2 Org Agreement Renew now	Texas Vaccines for C and Adult Safety Net Enrollment Status Not Started No Enrollment Data Available fo	hildren Program or 2023	PANDEMIC PROVIDER ENROLLMENT AND AND AND AND AND AND AND AND AND AND	Vaccine Storage and Handling Report an Adverse Event to VAERS Vaccination Guidance During a Pandemic
Bidirecti Data Exch Click to submit your re Bidirectional Exchange of Imm Immunization	onal nange agistration of Intent for unization with the Texas Registry	Supp submit View	Dort Ticket a Support Ticket V Ticket Status	

Figure 4 - Link to Begin Bidirectional DX Onboarding

Texas Department of State Health Services Immunization Unit

Page 5



### Parent Organization

Select "Yes" or "No" to indicate whether your organization will pass on information for other locations. See *Figure 5 – Will Your Organization Pass Info to/for Other Organizations*.

Will your organization report or submit for multiple locations/facilities?	• Yes O No
--	------------

Figure 5 - Will Your Organization Pass Info to/for Other Organizations

### Contacts

Review your organization's Point of Contact. Note that the point of contact provided will be responsible for ongoing data exchange communications between the organization and the registry. *See Figure 6 – Organization Point of Contact*.

Organization Point o	of Contact			
When the Registration instructions on how to	of Intent is received complete the onboa	by the Texas Immur rding process for bi	nization Registry, the person lis directional data exchange.	ted below will receive an email with
Note: The person liste	d must be an employ	ee of the <mark>f</mark> acility ind	icated above.	
First Name	Last Name	Title	Phone Number	Email
Fred	Sproutz	Manager	(123) 123-1234	FredS@sproutcare.com

Figure 6 - Organization Point of Contact

Texas Department of State Health Services Immunization Unit



### **Texas Immunization Registry**

Next, designate three contacts for data exchange (see *Figure 7 – Three Contacts for Data Exchange*):

- Primary Data Exchange Contact
- Secondary Data Exchange Contact
- Information Technology (IT) Contact

Note that these contacts must be different people with unique email addresses.

Primary Data Exchange Contact		
Note: The person listed must be an	employee of the facility indicated above.	
*Will you act as the Primary Data B	ixchange (Dx) Contact from this organizat	ion?      Ves O No
Secondary Data Exchange Conta Note: The person listed must be an	ct employee of the facility indicated above.	
*Will you act as the Secondary Dat	a Exchange (Dx) Contact from this organi	zation? O Yes O No
*Select from existing Contacts of dropdown list, select Add New select the desired contact.	on file for this organization. Review th if the desired contact's name is not li	e people in the Select a contact V Add New [-] sted. Otherwise,
*Please provide the Secondary Dat	a Exchange (Dx) Contact Information belo	W
First Name*	Last Name*	Title*
Sally	Sproutz	2. DX Contact
Phone Number*		Email Address*
321 321 3211 ×		SallyS@sproutcare.com
T Contact *Will you act as the IT Contact from *Select from existing Contacts of dropdown list, select Add New select the desired contact.	n this organization? on file for this organization. Review th if the desired contact's name is not li	e people in the Select a contact V Add New [-]
*Please provide the IT Contact Info	rmation below.	
First Name*	Last Name*	Title*
Sam	Sproutz	DX IT Contact
Sam Phone Number*	Sproutz	DX IT Contact Email Address*

Figure 7 - Three Contacts for Data Exchange

Texas Department of State Health Services Immunization Unit

Page 7



#### Readiness

Confirm whether you are already submitting HL7 data to ImmTrac2, and whether your facility and EHR can both send and receive data. See *Figure 8 – Readiness*.

*Are your facility and EHR vendor ready and able to perform bidirectional data exchange?	gistry? 💽 Yes 🔿 No	*Is your facility currently exchanging HL7 data with the registry
Are your facility and Erik vehicor ready and able to perform bull ecclonaridate exchange:	rm bidirectional data exchange?	*Are your facility and EHR vendor ready and able to perform b

Figure 8 - Readiness

#### EHR

Fill in details for your EHR solution, including whether they can send HL7 2.5.1 formatted data. See *Figure 9 – Electronic Health Record (EHR) Vendor*.

Electronic Health Red	cord Vendor		
Review the current info	prmation for your EHR and make	e updates as needed.	
*Select the company	name of your EHR Vendor.	Allscripts	~
If your EHR Vendor is	not listed, please select OTHER	from the list.	
*Select the EHR Prod	uct used in this location.	Allscripts ED Version- 7	~
*Can the EHR send H	L7 2.5.1 formatted data?	● Yes ○ No	
If your EHR vendor ca contact ImmTracMU@	nnot support HL7 2.5.1, your or odshs.texas.gov for assistance w	ganization cannot proceed with bidirec /ith unidirectional data exchange onboa	tional data exchange onboarding. Please arding.
*Select/Add your Elect from the company se	ctronic Health Record Contact lected above.	✓ Add Nev	v [-]
EHR Contact Name (N	Not in the list above)		
		Dhone Number	Email Address*
First Name	Last Name	Phone Number*	Lindi Address

Figure 9 - Electronic Health Record (EHR) Vendor

Texas Department of State Health Services Immunization Unit



### **Authorization to Release Credentials**

Authorize ImmTrac2 to release your credentials to your EHR vendor. See *Figure 10* – *Authorization to Release Your Credentials to Your EHR Vendor*.

\*Please select one of the following: • Yes I authorize the registry to release the BIDX credentials to the EHR Vendor. • No I DO NOT authorize the registry to release the BIDX credentials to the EHR Vendor.

Figure 10 - Authorization to Release Your Credentials to Your EHR Vendor

Data Exchange Credentials will only be released to the organization Point of Contact (POC). If you wish to have the registry provide your chosen EHR vendor BiDX credentials you must choose "Yes, I authorize the registry to release the BiDX credentials to the EHR vendor". If you choose "No I DO NOT authorize the registry to release the BiDX credentials to the HER vendor", it will be the responsibility of the organization POC to provide the EHR vendor with BiDX credentials.

### **3<sup>rd</sup> Party Data Aggregation**

Indicate whether your organization will connect to ImmTrac2 via a 3<sup>rd</sup> party aggregation bridge. See *Figure 11 – Data Aggregation Bridge*.

A data aggregation bridge acts as a connection to ImmTrac2 where data is sent from your organization's EHR solution to the data bridge, then is forwarded onto ImmTrac2 from the data bridge. For example, the CDC Immunization Gateway (aka the IZ Gateway), Iron Bridge or a Health Information Exchange (HIE).

If  $3^{rd}$  part data aggregation does not apply to your organization, please leave these fields blank.



Figure 11 - Data Aggregation Bridge

Texas Department of State Health Services Immunization Unit

Page 9



#### **Exchange Method**

Indicate which method of bidirectional data exchange your facility will use:

 Update-Only, meaning only sending immunization date (see Figure 12 – Update Only).

\*Which method will your facility (through your EHR Vendor) use for bidirectional data exchange? Update ONLY

Figure 12 - Update Only

 Query-Only, meaning look up/receive immunization data (see Figure 13 – Query Only).

\*Which method will your facility (through your EHR Vendor) use for bidirectional data exchange? Query ONLY

Figure 13 - Query Only

• Update and Query, meaning Bidirectional-both send and receive immunization data (see *Figure 14 – Update and Query*).

\*Which method will your facility (through your EHR Vendor) use for bidirectional data exchange? Update and Query 🔹 🗸

Figure 14 - Update and Query

Note that you must be able to perform bidirectional exchange formatted in HL7 2.5.1 to proceed with onboarding. Contact <u>ImmTracMU@dshs.texas.gov</u> for assistance with unidirectional data exchange onboarding.

Texas Department of State Health Services Immunization Unit



### **Electronically Signing and Submitting**

To submit your Registration of Intent (see *Figure 15 – Submitting the Registration of Intent*):

- 1. Review your information.
- 2. Check the box to verify that you are authorized to sign for your organization.
- 3. If you are not authorized to sign for your organization, send to the authorized signer to complete registration.
- Click the Edit button to return and revise it, or Sign & Submit to proceed. On the next screen check the box to sign electronically and click the Submit button.

sec. 101.003), including usRigenny	using mormation in the immonization registry to solicit new patients or clients.
E. I acknowledge that any unauthorize	d disclosure of Registry information will result in my losing the ability to access ImmTrac2.
F. I agree to protect the ImmTrac2 use	rname and password from unauthorized users.
G. I verify that I am an authorized Imm	iTrac2 Registry user and will only use the ImmTrac2 username assigned by DSHS.
H. I have read and agree to the terms	on this ImmTrac2 Organization Agreement and Confidentiality Statement.
By Authorized Signer	DATE: 01 13 2023
Fred Sproutz Manager	
(123) 123-1234	
FredS@sproutcare.com	
bave read and agree to comply with t	the Organization Agreement and Confidentiality Statement as presented in this section
have read and agree to comply with	ne organization Agreement and confidentiality statement as presented in this section.
Signed electronically by: Fred Sproutz	
	SUBMIT

Figure 15 - Submitting the Registration of Intent

Texas Department of State Health Services Immunization Unit



### **Texas Immunization Registry**

After you submit your registration of intent, you will see a confirmation message. Click the **Continue** button (see *Figure 16 – Continue to Onboard*).

	Registration of Intent for Bidirectional Data Exchange
Your Registr submit	ation of Intent for Bidirectional Data Exchange has been successfully ted. A confirmation email has been sent to your email account.
Click the Co	ntinue button to return to the onboarding page and progress to the next step in the process.
	Continue

Figure 16 - Continue to Onboard

Texas Department of State Health Services Immunization Unit



### **Registration for Query-Only Data Exchange**

On the following screen, for organizations that indicated a Query-Only data exchange connection during registration, you will see that the registration step is already completed, and you can proceed to Onboarding Step 2.



Figure 17 - Registration for Query-Only is Complete

### **Registration for Update-Only and Bidirectional Data Exchange**

For organizations that indicated an Update-Only or a Bidirectional data exchange connection, you will see that the registration step is partially complete now. Click the **Continue** button to designate the mode you will use to submit consent information.

Registration At this point the ImmTrac2 Confidentiality Agreement has been submitted and the Data	a Exchange profile completed.
Click Continue below to read about Texas' consent requirements and tell how this organ	nization intends to submit it.
Submit the ImmTrac2 Confidentiality Agreement	
Submit BIDX Registration of Intent (ROI) 📶	
Consent Mode: Flat File or HL7 Submission or Manually	
	Continue

*Figure 18 - Registration for Update-Only and Bidirectional is Partially Complete* 

Texas Department of State Health Services Immunization Unit



### Choosing a Consent Mode

A patient's written consent (minor and adult) using an official DSHS registry consent form is required for inclusion of all data in the registry, except in the event of a publicly declared disaster. Written consent must be given by a parent or legal custodian if a patient is younger than 18 years of age. Official ImmTrac2 Consent Forms are available on our <u>Department of State Health Services (DSHS) website</u>:

- ImmTrac2 Minor Consent Form
- ImmTrac2 Adult Consent Form
- ImmTrac2 Disaster Retention Information Consent Form

The signed registry consent form must be archived with the provider's office and in the patients' medical records after your organization has reported the registry consent to ImmTrac2 via one of the below methods.

Do NOT send (by fax, mail, or email) the signed registry consent forms to the registry for storage or processing.

Please review the Texas Immunization <u>Registry – Consent Overview</u> to understand Texas' unique registry consent legislation and requirements.

- **Flat File:** Separate from HL7 submissions to ImmTrac2 and follows the Electronic Standards for Affirmation of Registry Consent.
- HL7 Submission: Included in updates from your electronic health record's HL7 submission to ImmTrac2 and follows the standards for Affirmation of Registry Consent via Health Level Seven. This is the preferred option for BiDX onboarding but is dependent on your EHR's capabilities to support Texas' unique registry consent values.
- **Manually:** Manually entered the ImmTrac2 online application by a staff member from your organization.
- Select the consent mode for your organization, then click the Save & Continue button.

**Note**: Flat File and Manually reporting methods are not recommend for BiDX onboarding. If Flat File or Manual methods of reporting registry consent apply to your organization, please email <u>ImmTracMU@dshs.texas.gov</u> for further assistance.



### 2. Preparation - Message Pre-Testing

Note: For Bidirectional (Update and Query) onboarding, you will need to pass pretesting for both VXU update and QBP messages. For Update-Only or Query-Only onboarding, you only need to pass pre-testing for only the connection type selected.

This section of the onboarding allows your organization to manually upload test HL7 messages to ensure they are formatted to comply with the Texas' and CDC's HL7 Message Requirements. You are responsible for creating your own HL7 (VXU and QBP) messages that will be validated through this section.

We strongly recommend coordinating with your EHR vendor to obtain HL7 messages that can be used for pre-testing. Pre-testing files are not submitted to the registry but are validated by the Syntropi application based on the Texas' and CDC's HL7 Implementation Guides. Test files must be in .hl7 or .txt format. Any files uploaded are changed to protect patient identifiable information (i.e., the patient information is de-identified).

To successfully complete pre-testing, you must submit one error free messages of the following:

- Historical VXU
- New VXU
- QBP

In the section, organizations will learn how to:

- Upload HL7 test messages
- Run the validation of HL7 test messages
- Identify if HL7 test messages marked as passed or failed
- Identify the HL7 segments and/or fields that require correction

To successfully complete pre-testing and testing, your organization will need to be familiar with the following resources. All are available on our Forms and Documents webpage at <a href="https://www.dshs.texas.gov/immunizations/providers/materials">https://www.dshs.texas.gov/immunizations/providers/materials</a>:

- Texas Immunization Registry HL7 2.5.1 Implementation Guide
- Texas Immunization Registry HL7 2.5 1 Error Guide

Texas Department of State Health Services Immunization Unit

Page 15



- Informational Guide on Bidirectional Data Exchange
- Affirmation of Registry Consent via Health Level Seven
- Electronic Standards for Affirmation of Registry Consent

#### VXU Update Messages

To pass pre-testing for VXU update messages, your organization must submit a valid historical immunization and a valid new immunization message.

1. Click the **Begin** button to start HL7 message pre-testing. See *Figure19– Message Pre-Testing*.



Figure 19 - Message Pre-Testing

Texas Department of State Health Services Immunization Unit

Page 16



 You are taken to the HL7 Validation Tool to where you can upload HL7 messages for testing and validation. Generate a sample HL7 VXU message from the Electronic Health Record Solution. Click the "Upload New File" button. See Figure 20 – VXU- Validation Status.

Description	Valid Historical Immuniza	ation Valid Current Immunization
otal valid messages must be received:	1	1
otal valid messages uploaded so far:	0	0
Instructions:		
2. Click the Upload button and bro	wse for the message file on your compute	or /ONLY bl7 and tyt file types are acceptable)
<ol> <li>The uploaded file will display at</li> <li>Click Run Validation.</li> <li>The Status column will update v</li> <li>Click View to see detailed validation</li> </ol> File Validation History	the top of the list of the Validation History with $\checkmark$ for a message that passes or $\bigotimes$	for a failed message.

Figure 20 - VXU Validation Status

- 3. The **Upload New File** page displays, allowing you to choose the following, see Figure 21: HL7 Message Type:
  - a. HL7 Message Type to be uploaded: VXU or QBP
  - b. What EHR-Product-Version the file was generated from
  - c. Choose the file to be uploaded



Figure 21 - HL7 Message Type

Texas Department of State Health Services Immunization Unit

Page 17



- 4. If submitting a VXU test file, then no changes are needed as the HL7 Message Type default. Click the Choose File button to browse files on your computer to locate the file you want to upload.
  - a. Once you have located the HL7 file you want to upload, select the HL7 test file and press the OK button.

Your file is attached to the application. You can now see the name of your file listed next to the Choose File button. See *Figure 22: Chosen File Listed*.

HL7 Message Type*	
VXU- Unsolicited vaccination record update	·
File is for EHR- Product- Version*	
3M Health Information Systems- 3M Ambulatory Revenue Mana	agement Software- 5
File is for Provider Site*	
IVITS-6369 Org	
Browse/Choose the file to upload*	
browse, encose the me to uploud	

Figure 22: Chosen File Listed

5. Select the **Upload File** button to upload the test file for validation. See *Figure* 23: Upload Test File.



Figure 23: Upload Test File

Texas Department of State Health Services Immunization Unit

Page 18



Texas Immunization Registry

Texas Department of State Health Services Immunization Unit

Page 19



6. You are taken to the **File Validation History** screen, which displays all the test files uploaded. In this case, you see only the first test file uploaded. Select the **Run Validation** hyperlink, under the View Detail column, to validate the uploaded test file. See *Figure 24: Run Validation*.

Description	ption Valid Historical Immunization Valid			id Current Ir	nmunization
Total valid messages must be rec	eived:	1		1	
Total valid messages uploaded s	o far:	0		0	
Instructions:					
<ol> <li>Generate a sample HL7</li> <li>Click the Upload button</li> <li>The uploaded file will di</li> </ol>	and browse fo splay at the top	r the message file on your cor o of the list of the Validation H	mputer. (ONLY .hl7 and .b listory below.	t file types a	re acceptable)
<ol> <li>Generate a sample HL7</li> <li>Click the Upload button</li> <li>The uploaded file will di</li> <li>Click Run Validation.</li> <li>The Status column will u</li> <li>Click View to see detaile</li> </ol> File Validation History	vxU message t and browse fo splay at the top update with 😒 d validation re	r the message file on your cor o of the list of the Validation H for a message that passes o sults for the file.	nputer. (ONLY .hI7 and .t) iistory below. r Ø for a failed messag	e.	re acceptable) pload New File
1. Generate a sample HL7     2. Click the Upload button     3. The uploaded file will di     4. Click Run Validation.     5. The Status column will u     6. Click View to see detaile     File Validation History     # EHR Product/Version	File Type	for a message file on your cor of the list of the Validation H for a message that passes o sults for the file.	r for a failed messag	e.	re acceptable) pload New File View Detail

Figure 24: Run Validation

The file is validated, for a temporary moment the View Detail column displays "In progress..." indicating the validation is occurring.

7. At the top of the File Validation History screen, is a validation summary of the file. The summary will indicate either Validation Failed or Validation Passed. See *Figure 25: View Validation Results*. Select the **View Error Report** button to view the detailed validation results of the uploaded test file.



Validation Failed	
Ø vxu 2.5.1	
Click View Error Report to view necessary corrections to meet state messaging requirements.	
View Error Report	

Figure 25: Viewing Validation Results

8. You are given a high-level detailed summary of the validation results. See *Figure 26: Message Summary Described*.

valuation pate: 00 29 2022 12:01	File Status 🔗 Te	ested By: IVITS S	ixty		
ile Type: VXU	File Name: 01 VXU Test 1.txt	Test 1 txt			
	<b>A</b>	L7 Version: 2.5.1			
# Message	Status	View Detail	View Su	mmary	
1. MSH ^~\& CERNER 1120416000 TXImm	Trac TxDSHS 202005	View	Vie	w	
Message Detail Validation	View	Summary	Export	Data	
The HL7 message submitted has been changed t	o protect Patient identifiable information.		d.	8	

Figure 26: Message Summary Described

Texas Department of State Health Services Immunization Unit

Page 21



**Texas Immunization Registry** 

- The **Result** area in the above screenshot shows the summarized results of how many segments/fields were valid, had error or had warnings.
- The **View Summary** area in the above screenshot (either the hyperlink or button) shows the specific hl7 segments/fields that had error or warnings as summarized in the Results.
- The **Message Detail Validation** area in the above screenshot provides a breakdown of each field and indicates if the submitted value is valid.
- The **Value** column in the above screenshot provides a pop-up window showing the value you reported in the test file for each row.
- The **Status** column in the above screenshot, , provides an icon summarizing pass, fail or warning results.

Under the Message Detail Validations section of the summary you are given a breakdown of each segment and field, provided the value that was in your test file and a status icon. See *Figure 27: Message Summary Columns*.

	essage	Detail Vall	Cations View Summary	Export [	Data
#	Segment	Field Name	Validation	Value	Status
1.	мѕн		Every message begins with MSH segment and MSH segment should be present only once in a message. For the batch file, the second MSH segment defines the beginning of second HL7 message.	See Value	¥
2.	PV1		PV1- Patient Visit Segment should be present only once in an HL7 message.	See Value	⊻
3.	OBX	OBX Segment	The OBX segment is a REQUIRED segment in the message.	See Value	0
			MSH1 is a Field Separator and is required value is 1 (pipe) (ASCII		

*Figure 27: Message Summary Columns* 

Texas Department of State Health Services Immunization Unit



Texas Immunization Registry

Description of columns:

- The first column, #, identifies a unique number for each segment/field captured in the message reported.
- The second column, Segment, identifies the HL7 segment for the item validated.
- The third column, Field Name, identifies the specific field in the listed segment validated.
- The fourth column, Validation, provides a description of the validation that is performed on that specific field.
- The fifth column, Value, contains the value that was reported in the specific message. By clicking the **See Value** hyperlink, you can see what you reported in that field/segment.
- The sixth column, Status, provides an icon summarizing pass, fail, or warning results.
  - The green checkmark indicates a pass of data quality review with no error or warning.
  - The orange-reddish circle with a slash icon indicates a failure of data quality review. A failure indicates data must be corrected and resubmitted.
  - $\circ$   $\;$  The yellow caution icon indicates a warning of data quality review.
- Click the Export Data button to download an annotated copy of the message. See *Figure 28: Export Option*.



# Texas Immunization Registry

1.		age				Status	View Detail	View Surr	imary
-	MSH	1~~\8	&  1122635011 TXImmTr	ac TxDSHS 201	608051025	1	View	Viev	v
M	CSS The HL	age	e Detail Validat	ions anged to protect	Patient identifiable info	View ormation.	Summary	Export D	)ata
#	Segm	ent	Field Name	Validation				Value	Status
1.	MSH			Every mess segment sh the batch f beginning o	age begins with MS ould be present onl le, the second MSH of second HL7 messi	H segment an y once in a m segment defi age.	d MSH essage. For nes the	See Value	~
2.	MSH	1	Field separator	MSH1 is a f (ASCII 124)	ield Separator and i	s required val	ue is   (pipe),	See Value	4
3.	мзн	2	Encoding characters	MSH-2 Enc the four ch separator, r subcompor 94, 126, 92	oding Characters is i aracters in the follow repetition separator, nent separator. Requ , and 38, respective	required. This wing order: th escape chara lired values ar ly).	field contains e component cter, and re ^~\& (ASCII	See Value	~
4.	MSH	2	Encoding Characters	The conten	t of this field is valid	i.		See Value	4
5.	MSH	4	Sending Facility	MSH-4 Sen	ding Facility is Requ	ired.		See Value	4
6.	MSH	4	Sending Facility	MSH-4 Sen	ding Facility must be	e a 9 digit nun	neric value.	See Value	~
7	MSH	5.1	Receiving Application	MSH-5.1 is BE populat	required. Content o ed with "TXImmTrac	f the first com	ponent MUST	See Value	~

#### Figure 28 – Export Option

Select the **View Summary** button to see an overview of the errors and warnings detected in the submitted test HL7 message. See *Figure 29: View Summary Selected*.

Texas Department of State Health Services Immunization Unit

Page 24



# Texas Immunization Registry

M	essage	Detail Valid	en changed to protect Patient identifiable information.	Export D	Data
#	Segment	Field Name	Validation	Value	Status
1.	MSH		Every message begins with MSH segment and MSH segment should be present only once in a message. For the batch file, the second MSH segment defines the beginning of second HL7 message.	See Value	~
2.	PV1		PV1- Patient Visit Segment should be present only once in an HL7 message.	See Value	~
з.	RXR	RXR	RXR segment is required.	See Value	
4.	OBX	OBX Segment	The OBX segment is a REQUIRED segment in the message.	See Value	0
_			MSH1 is a Field Separator and is required value is   (pipe), (ASCII		

Figure 29: View Summary Selected

Focus on reviewing the errors and warnings listed in this section as they need to be corrected. See *Figure 30: Warning and Errors Analysis*. Passing segments are not shown.

Eva	uation l	Date: O	6 27 2022 16:55	File Status: O Tested By: Bidx Interface		
File	Type: V	xu		File Name: HL7 test Message.txt		
Res	Result: 🛩 97 Vali 🧭 18 Errors 🔔 5 Warnings			Varnings		
	Aes	sage	es Informatio	n		
#	Me	ssag	e		Status	
1.	MSHIA~\&/READVSETI1146780024ITXImmTracITxDSHSi2021					
E	rro	rs	I	L		
#	<b>rro</b> Segi	nent	Field Name	Validation	Status	
# 1.	Segi RXA	nent 4	Field Name Administration End Date	Validation RXA-4: Administration End Date MUST equal value provide for Date/time start of administration in RXA-3.	Status Ø	
# 1. Val	Segi RXA ue Ser	rs ment 4 nt:	Field Name Administration End Date	Validation RXA-4: Administration End Date MUST equal value provide for Date/time start of administration in RXA-3.	Status Ø	
# 1. Val	Segi RXA ue Ser PID	rs ment 4 nt: 22.1	Field Name Administration End Date Ethnicity	Validation RXA-4: Administration End Date MUST equal value provide for Date/time start of administration in RXA-3. PID-22.1 Ethnicity Code, if populated, is validated for value sent from HL7 table 0189. This field further defines the patient's ancestry.	Status	
# 1. Val 2. Val	RXA PID ue Ser	rs ment 4 nt: 22.1	Field Name Administration End Date Ethnicity known	Validation RXA-4: Administration End Date MUST equal value provide for Date/time start of administration in RXA-3. PID-22.1 Ethnicity Code, if populated, is validated for value sent from HL7 table 0189. This field further defines the patient's ancestry.	Status Ø	

Figure 30: Warning and Errors Analysis

Texas Department of State Health Services Immunization Unit

Page 25



### Texas Immunization Registry

Continue to repeat the steps outlined in this section, Message Pre-Testing, to address all errors and warnings.

Texas Department of State Health Services Immunization Unit

Page 26



### **QBP Messages**

To pass pre-testing for QBP messages, your org must submit a valid query message. Click the **Upload New File** button again to upload a QBP message.

1. Click the **Begin** button to start HL7 message pre-testing. See *Figure 31 – QBP Message Pre-Testing*.

Preparation Message Pre-Testing	
This phase of the onboarding process checks to see if the HL7 messages generated by federal messaging requirements. Click Begin to complete the tasks listed below. HL7 Message Pre-Testing. The requirements and status are displayed below:	the EHR comply with state and
QBP MSG Validation: 0 of 1 Valid Query MSGs have passed validation.	
	Begin

Figure 31 - QBP Message Pre-Testing

- 2. Generate a sample HL7 QBP message from the Electronic Health Record Solution.
- 3. Click the **Upload New File** button and browse for the message file on your computer. (ONLY .HL7 and .txt file types are acceptable)

Fil	e Validation History				Upl	oad New File
#	EHR Product/Version	File Type	File Name	Evaluation Date	Status	View Detail
			No Records Found	d.		

Figure 32 - Upload New File



### **Texas Immunization Registry**

4. On the following view, set the message type to QBP, then choose and upload the test message file. See *Figure 33 – Set Message Type to QBP and Upload File*.

VXU- Unsolicited vaccination record update	~		
VXU- Unsolicited vaccination record update			
QBP- Requesting Information Immunization History HL7 2.5	.1		
Allscripts- Allscripts ED Version- 7		~	
File is for Provider Site*			
Sprout Care Pediatrics			
Browse/Choose the file to upload*			
Choose File No file shares			

Figure 33 - Set Message Type to QBP and Upload File

5. The uploaded file will display at the top of the list of the Validation History below. Click the **Run Validation**. See *Figure 34 – QBP Run Validation*.

#	EHR Product/Version	File Type	File Name	Evaluation Date	Status	View Detail
1	EpicCare Ambulatory- 2010	QBP	Co251_QBP_19.txt	01 16 2023 10:17	0	Run Validation

Figure 34 - QBP Run Validation

Texas Department of State Health Services Immunization Unit



The Status column will update with Passed for a message that passes or Failed for a failed message. See *Figure 35 – QBP Failed Validation* and *Figure 36 – QBP Passed Validation*.

#### Failed

#	EHR Product/Version	File Type	File Name	Evaluation Date	Status	View Detail
1	EpicCare Ambulatory- 2010	QBP	Co251_QBP_19.txt	01 16 2023 10:17	0	View

Figure 35 - QBP Failed Validation

#### Passed

#	EHR Product/Version	File Type	File Name	Evaluation Date	Status	View Detail
1	EpicCare Ambulatory- 2010	QBP	Co251_QBP_19.txt	01 16 2023 10:17	4	View

Figure 36 - QBP Passed Validation

Click the **View** link to see detailed validation results for the file.

On the following view, you can select to view the detailed view or the summary view. See *Figure 37 – Select Detailed View or Summary View*.

#	Message	Status	View Detail	View Summary
1.	MSH  ^~\&   EZEMRX   10   TXImmTrac   TxDSHS   20200817052424	0	View	View

Figure 37 - Select Detailed View or Summary View



### **Texas Immunization Registry**

The detailed view allows you to see which segments passed validation and allows you to click to see a specific value. See Figure 38 – Detailed View of Validation Results. Click the **Export Data** button to download an annotated copy of the message.

#	Mess	age		.+.	Status	View Detail	View Sum	nmary
1.	MSH	^~\{	&  1122635011 TXImmTr	c TxDSH3 201608051025	×	View	Viev	v
M	CONTRACT	<b>age</b> 7 me	Detail Validati  ssage submitted has been chr	<b>DNS</b> nged to protect Patient identifia	View	Summary	Export [	Data
#	Segm	ent	Field Name	Validation			Value	Status
1.	мзн			Every message begins wit segment should be prese the batch file, the second beginning of second HL7	th MSH segment an int only once in a m MSH segment def message.	d MSH essage. For ines the	See Value	~
2.	MSH	1	Field separator	MSH1 is a Field Separator and is required value is   (pipe), (ASCII 124).		See Value	4	
3.	MSH	2	Encoding characters	MSH-2 Encoding Characters is required. This field contains the four characters in the following order: the component separator, repetition separator, escape character, and subcomponent separator. Required values are ^~\& (ASCII 94, 126, 92, and 38, respectively).			See Value	~
4.	MSH	2	Encoding Characters	The content of this field i	s valid.		See Value	4
5.	MSH	4	Sending Facility	MSH-4 Sending Facility is	Required.		See Value	~
6.	MSH	4	Sending Facility	MSH-4 Sending Facility m	nust be a 9 digit nur	neric value.	See Value	~
7.	MSH	5.1	Receiving Application	MSH-5.1 is required. Con BE populated with "TXIm	tent of the first con mTrac".	nponent MUST	See Value	~

Figure 38 - Detailed View of Validation Results

Texas Department of State Health Services Immunization Unit



### **Texas Immunization Registry**

The summary view gives higher level view of the message's status broken down into errors and warnings (see *Figure 39 – Errors and Warnings*). Passing segments are not shown.

Messages Information							
#	Message			Status			
1.	MSH ^~\&  1122635011 T	XImmTrac TxDSHS 201608051025		✓			
Errors							
#	Segment	Field Name	Validation	Status			
	No Issues found with the message.						
W	Warnings						
#	Segment	Field Name	Validation	Status			
		No Warning(s) found in the message.					
Close							

Figure 39 - Errors and Warnings

Click the **Close** button to return to upload more messages.

When you have passed the message type requirements specific to your organization, you can proceed to the next onboarding step.

Note: In bidirectional (Update and Query) onboarding, you will have to pass both message type requirements to proceed to onboarding step 3. VXU update and QBP only connections will display only the message validation necessary for that connection. (*see Figure 40 – Message Pre-Testing for Bidirectional Onboarding*)



Figure 40 - Message Pre-Testing for Bidirectional Onboarding

Texas Department of State Health Services Immunization Unit

Page 31



Texas Immunization Registry

### **3. Connectivity and Transport**

For Update-Only, Query-Only, and Bidirectional onboarding, click the **Begin** button to start Step 3. See *Figure 41 – For Update-Only, Query-Only, and Bidirectional Onboarding – Begin Connectivity and Transport*.

**IMPORTANT:** This step will be simplified if you connect through a 3rd party aggregation system like an IDNS or HIE. You will not need to download the WSDL file or establish the test interface.

In this section you will be able to:

- Download the WSDL to connect to the ImmTrac2 testing environment
- Establish an electronic data exchange interface for testing needs
- Validate whether you successfully connected to the registry's test environment



*Figure 41 - For Update-Only, Query-Only, and Bidirectional Onboarding – Begin Connectivity and Transport* 

Click the link to **Download** the WSDL file to set up your test connection to the ImmTrac2 Test environment.



Figure 42 - Download the Test WSDL File

Texas Department of State Health Services Immunization Unit

Page 32



To establish the test interface, configure your EHR with the WSDL settings and then begin submitting HL7 test messages. The system will monitor messages received and mark this step as passed upon the first successful message received indicating connectivity has been established between ImmTrac2 Test and your EHR.

1. Once configured, your organization must submit one test hl7 message to determine if you are successfully connected to the registry's test environment.

- a. A successful connection returns an hl7 response back based on the submitted test message.
- b. An unsuccessful connection returns a response back of "Credential check failed" or an xml message indicating there is an issue. To troubleshoot, please contact our Interoperability Team for technical support.
- c. Note Only VXU messages sent with consented clients or QBP's will trigger the step "Validate Connectivity with the ImmTrac2 Test Environment and your EHR." To reflect as passed. See Figure 41: For Update Only, Query Only, and Bidirectional Onboarding – Begin Connectivity and Transport.

This section is marked as pass upon successfully connecting to the registry's test environment using the test WSDL.

Texas Department of State Health Services Immunization Unit

Page 33



### 4. Pre-Production Testing – Message Validation

To begin pre-production testing download the VXU Test Cases and QBP Test Cases document. If you require only VXU update or QBP connections, the associated message validation window and test cases document will display only.

In this section you will be able to:

- Submit test HL7 message
- Identifies if the test HL7 messages pass or fail based on ACK response
- Review ACK breakdown for pass rate
- Download the query test cases
- Complete pre-production testing

Follow and fill in the Test Cases form, and then click the **Choose File** button to select and the **Upload** button to upload the document. See *Figure 43 – Pre-Production Testing – Message Validation*.

Texas Department of State Health Services Immunization Unit

Page 34



his phase of the onboarding naintains the configuration ar	process ensures messaging generated across the interface to the ImmTrac2 Test System id compliance and are consumable by ImmTrac2.
VXU MSG Validation:	Successful VXO Message Count (AA Acknowledgements): Nate: 76
The rate is calculated to be corrected to me 2. Complete the VXU Test • Download VXU • Upload the VX	f automatically and will provide detailed message analysis to determine what needs set the 90% pass rate requirement. Cases for submittine undates to ImmTrac2. Test Cases Download VXU Test Cases U Test Results. Choose File No file chosen Upload Review Needed Corrections
O QBP MSG Validation:	Use the test cases files below to query Immtrac2 Test
To validate Query/Response to what is in expected in the 1. Complete the QBP Test • Download QBF • Upload the QB	Messaging correct your QPB query messaging based on the RSP received compared case. Cases for submitting updates to ImmTrac2. Test Cases, Download QBP Test Cases P Test Results. Choose File No file chosen Upload

Figure 43 - Pre-Production Testing - Message Validation

To successfully complete pre-production testing, your organization will need to be familiar with the following resources. All are available on our <u>DSHS website</u>:

- <u>Texas Immunization Registry HL7 2.5.1 Implementation Guide</u>
- Texas Immunization Registry HL7 2.5.1 Error Guide

Texas Department of State Health Services Immunization Unit

Page 35



**Texas Immunization Registry** 

#### VXU Test Cases

See Figure 44 – VXU Test Patients.

VXU Test Patients		
Test Patient 1 - Infa	nt	
VXU Transaction		
Errors Received		 
Additional Details		

Figure 44 - VXU Test Patients

#### **QBP Test Cases**

See Figure 45 – QBP Test Patients.

Health and Human Services Health Ser	artment of State vvices	
Test Patient 1		
Patient Name	PRINCESS CONSUELA PHALANGE	
Date of Birth	5/7/2004	
Gender	F	
Mother	DANI DRAGON	
Patient's Address	6545 ALAMEDA AVE EL PASO TX 79905	
County	EL PASO	
Scenario	1:1 MATCH	
Errors Received		
Additional Details		
Additional Details		
Additional Details		

#### Figure 45 - QBP Test Patients

Texas Department of State Health Services Immunization Unit

Page 36



### **Step 1: Submit HL7 Test Messages to ImmTrac2 Test Environment**

Using your organization's test bidirectional data exchange account, submit test messages to the registry's test environment for validation of the ACK responses.

Upon the submission of test HL7 messages, Syntropi monitors all messages submitted to track the information below in the Test Validation Status Summary section of the page. See *Figure 46: Test Validation Status Summary*.

Fields include:

- Validation of connection to test
- # of Messages received (# MSG's Rec'd)
- Last Submit Date
- Pass/Fail indication of the number of minimum requirements met (# Min Req Met)
- VXU Validation Summary
  - # of AA ACK responses
  - # of AE-E ACK responses
  - # of AE-W ACK responses
  - # of AR ACK responses
  - # of RSP
  - # Minimum Requirement to Pass (#Min Req to Pass)
  - Current Rate (pass rate)

Click the **Review Needed Corrections** button (see Figure 43 – Pre-Production Testing – Message Validation) to bring up the Message Validation Summary page and get feedback on test messages (see Figure 46 – Message Validation Summary).

Texas Department of State Health Services Immunization Unit

Page 37



ubmit HL	Messages to t	the ImmTrac2 Test	t environmen	t	
/lessages subr nessage link b igher to pass	nitted to ImmTrac2 elow to see the res and complete this p	Test are automatically t ults. Correct any issues phase.	racked under the identified and res	VXU Validation Summary se ubmit as needed. Message	ection. Click on the view s must reach a rate of 90% o
Message \	/alidation Sumi	mary # MSG's Rec'd:	Last Sub	mit Date: 🧭	# Min Req Met:
		VXU	Validation Sum	mary	
# AA:	# AE-W:	# Min Req to	o Pass%:	Curre	ent Rate:
# AA: # AE-E:	# AE-W: # AR:	# Min Req to # RSP:	o Pass%:	Curre	ent Rate:
# AA: # AE-E: # Result	# AE-W: # AR: Control ID	# Min Req to # RSP: Message Type	o Pass%: Received	Curre Validation Summan	y View Message

*Figure 46 – Message Validation Summary* 

For Bidirectional onboarding, you will perform this process for the VXU Test Cases first, and then the QBP Test Cases.

Texas Department of State Health Services Immunization Unit

Page 38



### Step 2: Review ACK Messages & Make Corrections

You are required to review the returned responses form ImmTrac2 Test environment to identify the areas in your hl7 messages that require correction.

- 1. You must work with your IT Support and EHR vendor for assistance with interpreting the HL7 ACK and RSP messages.
- 2. Identify what specific areas of the HL7 messaging need to be corrected.
- 3. Correct the HL7 messaging.
- 4. Submit new test messages.

As you submit a test message, the test validation statistics are calculated.

#### **Step 3: Download Query Test Cases**

- 1. Select the **Download Query Test Cases** hyperlink to retrieve the necessary test plan your organization must complete.
- 2. Work internally with your organization, IT Support and EHR vendor to perform the query test cases.
- 3. Monitor the RSP back for the query test cases and make corrections to your system according to the test plan.

Texas Department of State Health Services Immunization Unit



### **5. Pre-Production Testing – Data Quality Review**

Your ongoing messages to the ImmTrac2 Test environment will be automatically monitored for quality. Step 5 allows you to review the quality of your message stream.

### **Bidirectional and Update-Only Onboarding**

To begin, click the **Review Data Quality Corrections Needed** button. See *Figure* 47 – Data Quality Review.

nis phase of the onboarding proce ertaining to the patient and immu le Review Data Quality Correction	ess ensures the data being sent to Im nization records. A 90% Data Qualitir s Needed button below to see issues	mTrac2 is complete and accurate information ng Rate is required to pass this phase. Click on to fix in order to meet the
ata Quality Rate: Achieve a S Calculated Metrics	20% success rate to pass Calculated Data Quality Rate	
Patient Demographic Completen	ess	
0	86%	
Immunization Completeness		

Figure 47 – Data Quality Review

Like the last section, you will use your organization's test bidirectional data exchange account to submit test messages to the registry's test environment.

The only difference is that in this part of the onboarding the messages are being validated for:

- Patient Completeness
- Immunization Completeness
- Immunization Accuracy

In this section, you will be able to:

- Submit test HL7 messages
- Review test HL7 messages for gaps in completeness and accuracy
- Achieve data quality metrics

Texas Department of State Health Services		Stoc
Immunization Unit	Page 40	Rev



Select the **Review Data Quality** button to begin.

#### Submit Test Messages

- 1. Upload test files using established test interface.
- 2. Use the Data Quality Review section of the onboarding to identify areas in the HL7 messaging that are not complete or accurate.

### Messages Tab

This tab gives a list of messages sent. It refers to the complete history of all messages sent across the test data exchange connection. See *Figure 48: Messages Tab*.

Pre	Pre-Production: Data Quality Review									
	Messages		Immunization Report		Patient Report		VFC Report	Qua	ality Summary	
#	Result	Control ID	Message Type	Re	eceived	Va	lidation Summary		View Message	
1	0	765567890	VXU: Non-Hx	03 16	5 2023 21:23	🗹 0 Vali	id 🥝 6 Errors 📥 2 War	nings	View	
2	0	765567890	VXU: Non-Hx	03 16	5 2023 20:09	🗹 0 Vali	id 🥝 4 Errors 📥 2 War	nings	View	
3	8	50977883	VXU: Non-Hx	03 14	4 2023 14:15	🗹 0 Vali	id 🥝 4 Errors 📥 2 War	nings	View	
4	0	50977883	VXU: Non-Hx	03 14	4 2023 14:11	🗹 0 Vali	id 🥝 4 Errors 📥 2 War	nings	View	
5	0	50977883	VXU: Non-Hx	03 14	4 2023 13:43	🗹 0 Vali	id 🥝 4 Errors 📥 2 War	nings	View	

Figure 48 - Messages Tab

Texas Department of State Health Services Immunization Unit

Page 41



### Immunization Report Tab (Completeness)

Locate the Immunization Completeness summary that refers to the complete recording of all data elements for the immunization event. See *Figure 49: Immunization Report Tab (Completeness)*.

e-Production: Data	a Quality Review			
Messages In	nmunization Report	Patient Report	VFC Report	Quality Summary
	Reporting Period F	rom [02]/[19]/[20	023 <b>To:</b> 03 / 21	)/2023 Run Repor
Completeness				
Field	% Re Cc	equired To Pass ompleteness	Current % of Completeness	Pass/Fail
Action Code Set		90%	100.00%	∠
Administering Provider		90%	100.00%	<b>~</b>
Administration Site		95%	100.00%	✓
Dosage- Completeness		95%	100.00%	<b>~</b>
Lot ID Number		95%	100.00%	<b>~</b>
Manufacturer		90%	100.00%	<ul><li>✓</li></ul>
Vaccination Date		100%	100.00%	✓
Vaccine Expiration Date		95%	100.00%	✓
Vaccine Program Eligibility	/	90%	0.00%	0
Vaccine Type (CVX)		100%	100.00%	✓

Figure 49 - Immunization Report Tab (Completeness)

Texas Department of State Health Services Immunization Unit



### Immunization Report Tab (Accuracy)

Locate the *Immunization Accuracy Summary* that refers to all data elements of a given immunization event. Ensure they are consistent and appropriate compared to the originating medical record. See *Figure 50: Immunization Report Tab (Accuracy)*.

Field	Description	lssue	Accuracy Score
Administered Date After DOB	Administered Date is after patient's DOB as expected		100.00%
Administration Route	Administration Route, RXR-1, is Required and Populated		100.00%
Age Range	Percentage of Records submitted where the vaccine is given within recommended age range		100.00%
Body Site	Body site is valid.		100.00%
Dosage- Accuracy	Validates that the administered dosage matches the accepted amount.		100.00%
Licensure Date	Vaccination administered within vaccine's licensure start and end dates		100.00%
Lot ID- Accuracy	Substance Lot Number is contains a valid lot number format for manufacturer.		100.00%
LotID, MVX, CVX 1	Administered vaccine's CVX code is linked to a valid, specified vaccine.		100.00%
LotID, MVX, CVX 2	Manufacturer code is a valid match for the CVX Code.	MVX MUST Match CVX	100.00%
Route Accuracy	Administered Route is valid for administered vaccine	Route must match vaccine	100.00%
Vaccine Expiration Date- Accuracy	Checks to ensure that the Vaccine Administration Date precedes the Vaccine Expiration Date		100.00%
VIS	VIS form date is correct		0.00%

Figure 50 - Immunization Report Tab (Accuracy)

Texas Department of State Health Services Immunization Unit



### Patient Report Tab - Patient Completeness Summary

This summary refers to the complete recording of all data elements for a patient. See *Figure 51: Patient Report Tab*.

Pre-Production: Da	ata Quality Review			
Messages	Immunization Report	VFC Report	Quality Summary	
	Reporting Period F	rom [2]/[19]/[20	023 <b>To:</b> 03 / 21	/ 2023 Run Report
Completeness				
Field	% Red Co	quired To Pass mpleteness	Current % of Completenes	F Pass/Fail s
Address		100%	87.50%	0
Mother/Father/Guardian		90%	100.00%	∠
Patient Name		100%	100.00%	✓
Phone Number		95%	100.00%	✓

Figure 51 - Patient Report Tab

Texas Department of State Health Services Immunization Unit



### VFC Report Tab

This report tallies VFC Eligibility by eligibility category. See *Figure 52 – VFC Report Tab*.

Messages Re		unization eport		tient Report VFC Report Q		Quality Summary		
VFC Eligibility	Cou	nt Percer	tage	The VFC	Report indicates	counts of patients		
Adult, No Insurance	0	0.00%		eligible for	r VFC (Vaccines fo	or Children) by VFC		
Adult, Private Pay/Insurance	surance 0 0.00%			Eligibilit	y Category for a g	given date range.		
Adult, Underinsured	0 0.00%							
American Indian/Alaskan Native				12/14/2022 to 1/13/2	023			
CHIP	0	0.00%			No Data Available			
Medicaid	0	0.00%						
No Insurance	0	0.00%						
Private Pay/Insurance	0	0.00%						
Underinsured, FQHC/RHC/Deputized	0 E	0.00%						
Underinsured, Not FQHC/RHC/Deputized	0	0.00%						

Figure 52 - VFC Report Tab

Texas Department of State Health Services Immunization Unit



### Quality Summary Tab

This tab displays overall message quality trends. See *Figure 53 – Quality Summary Tab.* 

Messages	Immu Rep	nization ort	Patient Re	port \	/FC Rep	oort	Qual	ity Sum	ima
Report Date: 03/21, Report Created by: Reporting Period: 1, 3/21/2023	eport Date: 03/21/2023 eport Created by: eporting Period: 1/1/2019 to /21/2023		Total Number of Patients Reported: 13 Total Number of Administered Shots Reported (VXU): 13 Total Number of Historical Shots Reported (VXU): 0 Total Number of Queries Submitted (QBP): 0					Total Number of Errors: 13 Total Number of Warnings: 0 Total Number of Rejections: 0 Average Timeliness for Period 103	
Immunizations Accuracy –									
Immunization 100% 80%	s Accuracy	Immuniza	ations Completene:	ss — Pa	atient Com	pleteness			
Immunization           100%           80%           60%           40%	s Accuracy	Immuniza	ations Completene:	ss — Pa	atient Com	pleteness			

Figure 53 - Quality Summary Tab

Texas Department of State Health Services Immunization Unit

Page 46



### **Query-Only Onboarding**

If you are doing Query-Only onboarding, Step 5 will be shorter. When your data quality review is complete, the Texas BiDX Team is automatically notified of your readiness to connect to the ImmTrac2 production environment. You will be contacted by the team to schedule your Go Live meeting. See *Figure 54 – Query-Only Onboarding – Transition to Production*.

Go Live	
Connectivity & Transport	a 10 1 10 10
In this phase of the onboarding process the data submission from the EHR will be tra ImmTrac2 Test System to the ImmTrac2 Production System.	nsitioned from sending data to the
🛕 Go Live- The Texas BIDX Team has been notified. You will be contacted to schedule your G	to Live meeting.
O Download ImmTrac2 Production WSDL	
Production Interface Validation	
	Pending Go Live Meeting

Figure 54 - Query-Only Onboarding - Transition to Production

Texas Department of State Health Services Immunization Unit

Page 47



### 6. Go-Live – Connectivity and Transport

#### **Overview**

This last section in the onboarding process allows the organization to establish a connection to the registry's production environment to begin submitting real patient and immunization data to the registry.See *Figure 55 – Go-Live Notification*.

Go Live	
Connectivity & Transport	
In this phase of the onboarding process the data submission from the EHR will be trans ImmTrac2 Test System to the ImmTrac2 Production System.	sitioned from sending data to the
🛕 Go Live- The Texas BIDX Team has been notified. You will be contacted to schedule your Go	Live meeting.
O Download ImmTrac2 Production WSDL	
Production Interface Validation	
	Pending Go Live Meeting

Figure 55 – Go-Live Notification

In this section you will:

- Meet live with the registry's Interoperability Team
- Download the WSDL to connect to the ImmTrac2 production environment
- Establish an electronic data exchange interface for production
- Validate whether you successfully connected to the registry's production environment
- Submit real patient and immunization data to the ImmTrac2 production environment

#### Support

For questions or concerns, please contact the ImmTrac2 help desk:

- Email: <u>ImmTracMU@dshs.texas.gov</u>
- Toll-Free: (800) 348-9158, Option 3

Texas Department of State Health Services Immunization Unit

Page 48